Renewable energy has witnessed unprecedented growth since the beginning of the millennium, surging 66 percent in the first decade of 2000. Consumption of renewable forms of energy during the same period jumped 67 percent. By sustaining this remarkable rate of growth, the national goal of securing 25 percent of the nation’s energy needs from renewable sources of energy will be met before the 2025 target date. A significant portion of that growth has been driven by policies, programs and funding mechanisms that have boosted renewable energy production while stimulating much needed economic development, improving national security and enhancing our environment.

A federal Renewable Fuels Standard established by Congress in 2007 to ensure the domestic production of clean, economically viable sources of transportation fuels remains the single most important policy tool to ensure stability in the biofuels market place. Renewable energy production and investment tax credits; DOE and USDA loan and loan guarantee programs; and funding mechanisms that offer grants in lieu of tax credits for wind, solar and other renewable energy facilities have helped launch the commercial production of innovative energy technologies and fuel sources.

With these many drivers of growth, it’s not surprising that the viability and validity of renewable energy production has been surging. At the same time, the expiration of important renewable energy tax credits and budget cuts driven by historic reductions in government spending have combined to create new challenges for renewable energy advocates. In this new era of fiscal austerity, 25x’25’s triple bottom line outcomes of sustained economic growth, improved national security and a cleaner environment become an even more powerful driver in advancing a new energy future for America.

What follows is but a small sampling of the recent major successes and accomplishments generated by the vital and evolving renewable energy sector.

**Biofuels**

Ethanol is the most widely used biofuel in the transportation sector with U.S. production growing from 1.6 billion gallons in 2000 to well over 13 billion gallons in 2011. Nearly 10 percent of all liquid fuel used on the road today is composed of ethanol, which studies have shown kept the price of gasoline down by $0.89 per gallon in 2010 alone. That’s a critical finding, given that a typical household spent an average of 8.4 percent of its annual budget on gasoline in 2011, the highest percentage since 1981.

The biodiesel industry produced nearly 1.1 billion gallons of biodiesel in 2011, more than doubling 2010 production, breaking the previous record of about 690 million gallons set in 2008, and far surpassing the 800 million gallons mandated by the federal Renewable Fuel Standard.

Advanced biofuel production moved closer to reality in 2011 with construction underway for the nation’s first three commercial-scale cellulosic biomass production facilities in Kansas, Iowa and Washington State.

In late 2011, the U.S. Navy signed a contract to purchase 450,000 gallons of advanced drop-in biofuel, the single largest purchase of biofuel in government history. The purchase will accelerate the development and demonstration of a homegrown fuel source that can reduce America’s, and the military’s, dependence on foreign oil.

Following the military’s lead, and aided by a new specification for hydroprocessed renewable jet fuel set by the ASTM International Committee on Petroleum Products and Lubricants, several commercial airlines began operating flights in 2011 using fuels blended with sustainable biofuels.
**Biogas**

Livestock operations, wastewater treatment plants and municipal solid waste landfills are sources of biogas that can be captured and turned into electricity and renewable fuel through anaerobic digestion. In the U.S., there are over 171 anaerobic digesters on farms in 33 states and about 1,500 more operating at wastewater treatment plants across the country. In 2009 alone, more than 520 operational landfill gas energy projects in 46 states supplied 13 billion kWh of electricity.

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**Wind**

U.S. wind power capacity grew to record levels in 2011, totaling 46,919 MW. The U.S. wind industry has added over 35 percent of all new generating capacity over the past 4 years, second only to natural gas, and more than nuclear and coal combined. Today, U.S. wind capacity represents more than 20 percent of the world’s installed wind power.

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**Geothermal**

At 3,102 MW, the United States is the world leader in installed geothermal capacity. Even so, our nation continues to develop its geothermal resources. The total number of geothermal projects under development, as well as geothermal prospects, reported in 2011 increased 12 percent over 2010. The geothermal industry now has power plants and small power units operating in nine states – compared to just four in 2005 – and expects to see more projects coming online in 2012 and 2013.

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**Hydropower**

Hydropower is the renewable energy source that produces the most electricity in the United States. Hydropower accounts for 66 percent of the nation’s renewable electricity generation and 7 percent of total electricity generation. Final U.S. hydropower generation numbers in 2011 are estimated to reach their highest level since 1999.